

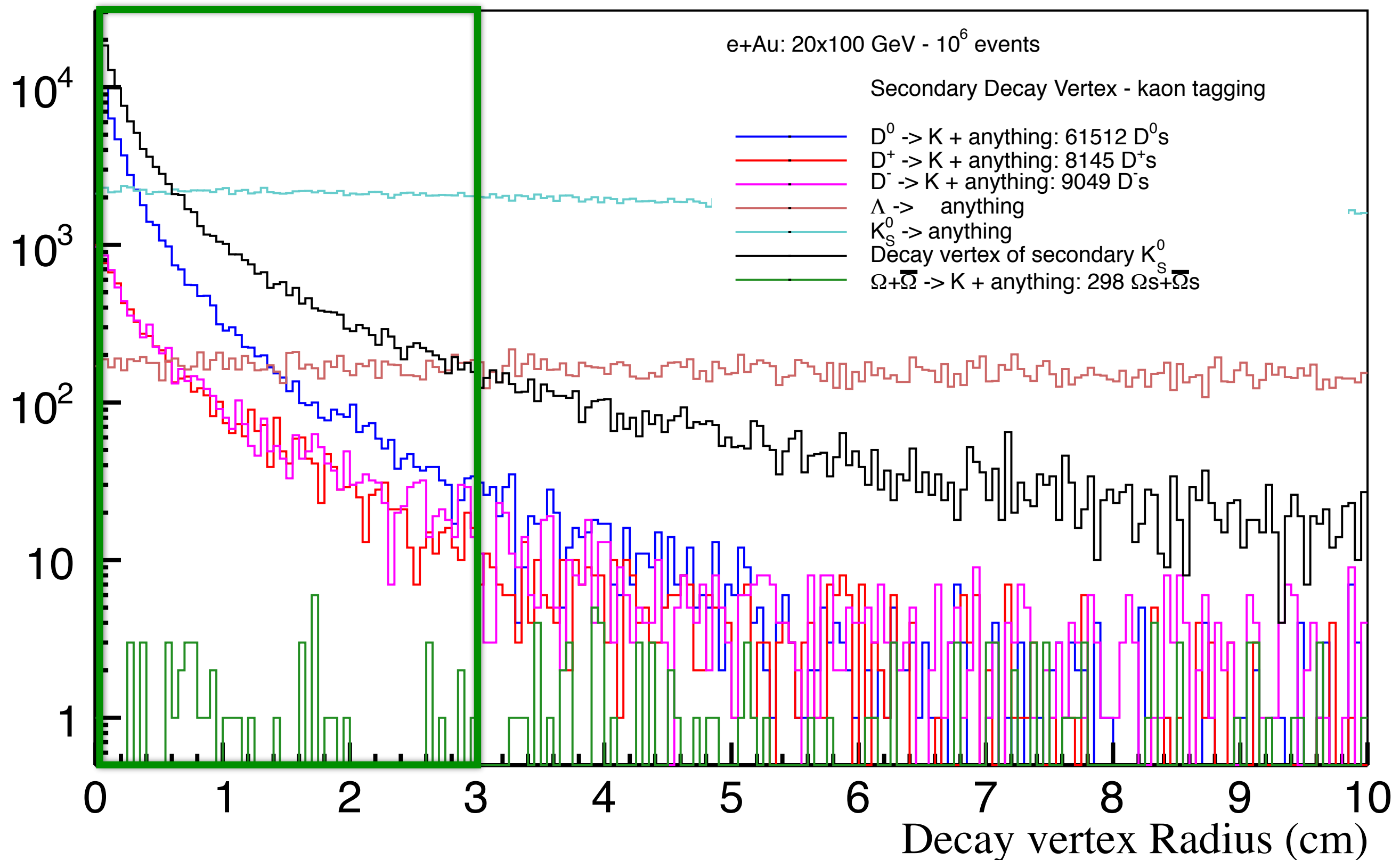
# Charm Reduced Cross- Sections Update

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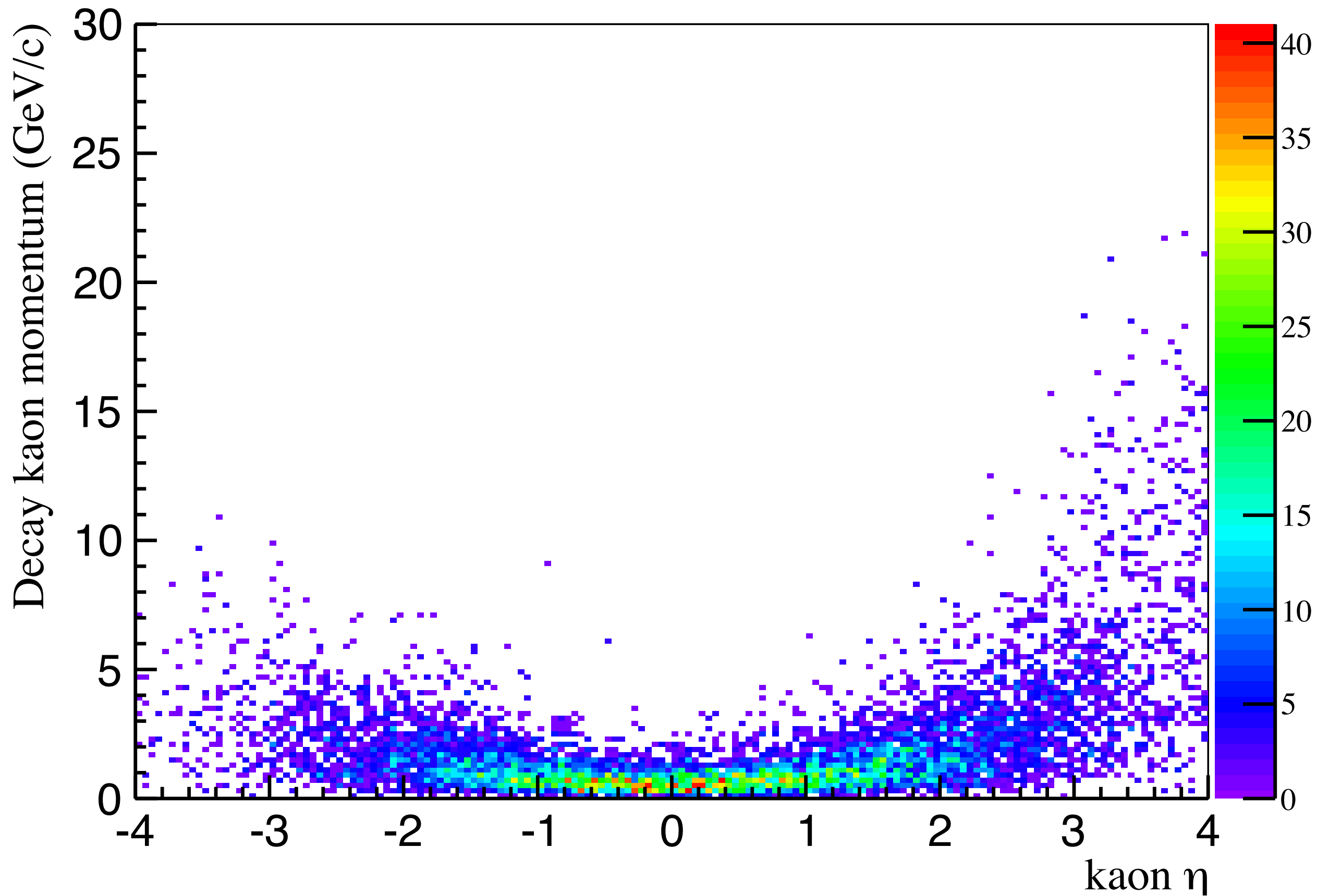
# Difference to last presentation

- Previously, I was just looking at  $D^{0,\pm}$
- I was unaware that we save information on the partons in our trees
- Now I am choosing events which have a charm quark
- Also applying a minimum momentum on the kaons of 200 MeV/c

# Decay vertices by particle



# Kaon $\eta$ -p from $D^\pm$ decays



small  $x, Q^2$  ( $x=5.1 \times 10^{-4}$ ,  $Q^2=1.39 \text{ GeV}^2$  )

	No Charm	With Charm
No cuts		
Decay Vertex		
Decay Vertex + identified kaons		
Decay Vertex + identified kaons + misidentified protons		

small  $x, Q^2$  ( $x=5.1 \times 10^{-4}$ ,  $Q^2=1.39 \text{ GeV}^2$  )

	No Charm	With Charm
No cuts	0.548	0.0499
Decay Vertex		
Decay Vertex + identified kaons		
Decay Vertex + identified kaons + misidentified protons		

small  $x, Q^2$  ( $x=5.1 \times 10^{-4}$ ,  $Q^2=1.39 \text{ GeV}^2$  )

	No Charm	With Charm
No cuts	0.548	0.0499
Decay Vertex	0.080	0.0496
Decay Vertex + identified kaons		
Decay Vertex + identified kaons + misidentified protons		

small  $x, Q^2$  ( $x=5.1 \times 10^{-4}$ ,  $Q^2=1.39 \text{ GeV}^2$ )

	No Charm	With Charm
No cuts	0.548	0.0499
Decay Vertex	0.080	0.0496
Decay Vertex + identified kaons	0.0108	0.01056
Decay Vertex + identified kaons + misidentified protons		



small  $x, Q^2$  ( $x=5.1 \times 10^{-4}$ ,  $Q^2=1.39 \text{ GeV}^2$ )

	No Charm	With Charm
No cuts	0.548	0.0499
Decay Vertex	0.080	0.0496
Decay Vertex + identified kaons	0.0108	0.01056
Decay Vertex + identified kaons + misidentified protons	0.0349	0.0328

small  $x, Q^2$  ( $x=5.1 \times 10^{-4}$ ,  $Q^2=1.39 \text{ GeV}^2$ )

	No Charm	With Charm
No cuts	0.548	0.0499
Decay Vertex	0.080	0.0496
Decay Vertex + identified kaons	0.0108	0.01056
Decay Vertex + identified kaons + misidentified protons	0.0349	0.0328

x3

high  $x, Q^2$  ( $x=0.129$ ,  $Q^2=43.93 \text{ GeV}^2$  )

	No Charm	With Charm
No cuts		
Decay Vertex		
Decay Vertex + identified kaons		
Decay Vertex + identified kaons + misidentified protons		

high  $x, Q^2$  ( $x=0.129$ ,  $Q^2=43.93 \text{ GeV}^2$  )

	No Charm	With Charm
No cuts	0.745	0.189
Decay Vertex		
Decay Vertex + identified kaons		
Decay Vertex + identified kaons + misidentified protons		

high  $x, Q^2$  ( $x=0.129$ ,  $Q^2=43.93 \text{ GeV}^2$  )

	No Charm	With Charm
No cuts	0.745	0.189
Decay Vertex	0.232	0.186
Decay Vertex + identified kaons		
Decay Vertex + identified kaons + misidentified protons		

high  $x, Q^2$  ( $x=0.129$ ,  $Q^2=43.93 \text{ GeV}^2$  )

	No Charm	With Charm
No cuts	0.745	0.189
Decay Vertex	0.232	0.186
Decay Vertex + identified kaons	0.00938	0.00914
Decay Vertex + identified kaons + misidentified protons		

high  $x, Q^2$  ( $x=0.129$ ,  $Q^2=43.93 \text{ GeV}^2$  )

	No Charm	With Charm
No cuts	0.745	0.189
Decay Vertex	0.232	0.186
Decay Vertex + identified kaons	0.00938	0.00914
Decay Vertex + identified kaons + misidentified protons	0.0986	0.0912

high  $x, Q^2$  ( $x=0.129$ ,  $Q^2=43.93 \text{ GeV}^2$ )

	No Charm	With Charm
No cuts	0.745	0.189
Decay Vertex	0.232	0.186
Decay Vertex + identified kaons	0.00938	0.00914
Decay Vertex + identified kaons + misidentified protons	0.0986	0.0912

$\times 10^{10}!!$